KEYNSHAM

RURAL DISTRICT COUNCIL.

ANNUAL REPORT

OF THE

Medical Officer of Health for the Year 1911.

GEO. GORDON & SON, TYP., 19, OLD KING ST. BRISTOL.


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17, Whiteladies Road,

Clifton, Bristol.

January, 1912.

To the Keynsham Rural District Council.

Gentlemen,

I beg to present for your consideration my Annual Report for the year 1911, dealing with the sanitary history of your district during that period.

Character, Configuration, Geology, and Occupation.—The description of these matters given in the 1894 Report may be taken as practically applicable to the year now under consideration. New houses are constantly in course of erection, chiefly in the parishes of Brislington and Keynsham, although some are from time to time being erected in the more rural parishes, particularly in Saltford and Whitchurch. The number of new buildings has this year again risen considerably over the number in 1910. The general character of the occupations of the inhabitants has practically undergone no change.

Sewerage and Excrement Disposal.

Brislington.—The sewerage system (present length about $4^{3}/_{5}$ miles) has continued to work satisfactorily; flushing has been regularly carried out, and the syphons under the brook have been cleansed four times during the year.

Keynsham.—The whole of the system so far laid, about $4^{3}/_{4}$ miles, has worked well and caused no trouble. By far the greater part of the general scheme of sewerage for the town is now completed. The principal portions yet to be made deal with Albert Road and a few houses lying on the lowest level. It is to be hoped that 1912 will see the commencement, if not the completion, of one of these remaining sections. The drainage of Charlton Park Road has been greatly improved by laying about 350 yards of sewer, the cost being borne partly by the owners, partly by the Council.

Saltford.—No complaint of or trouble from the sewers here existing has arisen during the past year.

Whitchurch.—The dry privy system in use in this village has worked satisfactorily, and no complaint has arisen. Whether, as building here progresses, the present system will be found to meet requirements is doubtful.

Newton-St.-Loe.—The sewers laid in this village in 1903 have worked satisfactorily, and no complaint has arisen. Some slight repairs have been necessary.

Improvement in the matter of excrement disposal in the smaller villages and more rural parts is of slow growth. Efforts to replace cesspit privies by other and better arrangements, such as dry privies, are continued, and during the past twelve months 11 W.C.'s have been constructed.

Bath Sewerage Scheme.—Work in connection with this scheme has been continued during the year, and an eye is being kept on the dwellings which may be erected for workmen, especially as regards excrement disposal and water supply.

House Drainage.—Plans for the drainage of all new buildings have to be passed by your Surveyor or Inspector before the drains are constructed, and the drains are tested before being covered in. In the more urban parts of Keynsham and Brislington the drains in connection with new buildings have been inspected and connected with the sewers. In the rural parts 14 drains have been repaired or cleansed, 7 relaid with pipes, 19 trapped or ventilated, 21 new pipe drains have been laid, 11 new W.C.'s provided, and 12 dry privies constructed.

Scavenging.—Periodical removal of refuse twice a week, under contract, has been continued in Brislington and Keynsham during the past year ; street watering is also carried out here during the summer.

No change in the method of disposal of refuse matter from that of previous years has taken place in the rest of the district.

Water Supply.—During the year 2 *new and 5 old houses have been supplied with Company's water. Seven samples have been analysed bacteriologically at the Somerset County Laboratory. Three of these were from the spring at Marksbury, and will be dealt with under the heading "Marksbury." Three were from wells, all were polluted ; in two cases the wells were closed and Company's water laid on. In the other, steps were taken to protect the well. One sample of West Gloucester Water Company's water was taken and found pure.

Chewton Keynsham.—The West Gloucester Company's supply carried to this village in 1904 continues to be of great benefit.

Keynsham.—In 1904 there was great complaint that the West Gloucester Water Company cut off the water for long periods without notice, and that the water was thick. Complaint of thickness was made this summer, but the defect soon ceased.

Whitchurch.—I am not aware of any complaint that the West Gloucester supply at this village has been unsatisfactory, as in 1906.

The Water Company has completed a reservoir for this village, so that the future failure of supply will be obviated.

* This figure does not represent the whole number of new houses in the district supplied this year with Company's water, but only those in the portion of the district to which the Building Bye-laws do not apply ; where the Bye-laws are in force water mains exist, and all new houses have Company's water.

Priston.—In April, I reported on the supply to this village as follows :—"The Public Supply for this village is good, but not sufficiently accessible to the inhabitants. Many houses have no supply at all save by going distances varying from 35 to 120 yards. Fetching water from such a distance is not reasonable and is likely to lead to insufficient cleanliness. Where there are wells they are shallow wells, open to surface soakage and pollution, and in some cases are used, or said to be used, only for washing. The public supply should be rendered reasonably available to all the houses by the provision of further taps; two or three more would, if properly placed, probably be sufficient. It seems a pity that with a good and ample supply available, it should be a difficult matter to use it. I believe the supply is the property of the owner of the estate, and I suggest that he be approached and asked to extend the facilities for use of the water. Those houses without a supply come under the Public Health Water Act, and the owner can be compelled to supply them ; further, they come under the Housing and Town Planning Act and might be considered unfit for habitation, as having no water supply."

I believe a copy of the above was sent to the owner, but up to the end of the year no action seemed to have been taken in consequence. The matter should not be lost sight of. The Inspector reports that the distance some users have to go is as much as 200 yards.

Marksbury—Following upon a visit of the County Medical Officer of Health and conversation as to the water supply for this village, a sample was taken in August from the Public Spring supplying part of the village and sent to the County Public Health Laboratory. The report sent back was "There is no evidence of dangerous pollution, but the presence of Bacillus Coli in 10 c.cs. is evidence of some contamination, possibly during collection." My report following receipt of the above opinion was "with regard to the spring I would say that several chemical analyses made some years ago showed presence of slight pollution, but not sufficient to cause serious apprehension. Still the presence of Bacillus Coli, now proved, shows that the water is at any time liable to serious and dangerous pollution, and it is very desirable that some means of supplying the whole village should be found, for the wells upon which several houses are dependent are practically certain to be polluted."

After discussion it was decided that as the spring ran in a tunnel for a little distance before reaching the shoot at which it discharges, a sample should be taken as high up in the tunnel as possible, and also another at the same time from the shoot. These samples were taken in November, and in December I reported as follows :—"I have received the following reports on two samples of water from Marksbury Spring :—(1) Spring : Marksbury Supply : Outside (dipping place) November 20th, 1911.

Colonies at 21°C = 650 per c.c.
Bacillus Coli over 1,000 under 10,000 per litre
Streptococci over 30 ,, 100 ,, ,,

Shows evidence of contamination and is not fit for drinking purposes.

(2) Marksbury Supply, taken at spring head, 20th November, 1911.

Colonies at 37°C = 18 per c.c.
,, ,, 21°C = 350 per c.c.
Bacillus Coli = over 100 under 1,000 per litre
Streptococci = ,, 100 ,, 1,000 ,, ,,

Shows evidence of contamination, and in its present state is unfit for drinking purposes.

These samples both show that this source of supply is contaminated with sewage matter. The spring being public and used for the gratuitous supply of water is vested in your Council under Section 64, P.H.A., 1875, and must either be maintained and plentifully supplied with "pure and wholesome water," or you may provide another supply of pure and wholesome water for gratuitous use, or may close the present supply. It is further the duty of the Council under the P.H. (Water) Act, 1878, to see that every occupied dwelling house within their district has within a reasonable distance an available supply of wholesome water. In the light of the above analyses this is not the case at Marksbury, and I am of opinion that some other source should be sought. It would also be well to consider the supply to this village as a whole, and to that end analyses should be made of all the wells in the village."

The spring is a very strong one and never fails, even last summer it ran strongly all the time, and it was felt that if it were possible to discover the source of pollution this might be dealt with and the spring purified. A Committee was accordingly appointed to visit with the Medical Officer and Inspector to examine the surroundings. This Committee met on December 11th, on the spot, the owner of the greater part of Marksbury being also present. Subsequently I reported on this visit :—"The spring was running very strongly, the quantity being more than sufficient to supply the whole village, and it is strange as well as unfortunate that such a large body of water cannot be traced more than a few yards. Possible sources of pollution were looked for, and it was felt that certain yards, cowsheds, pigsties, and stables were so situated, and in such a condition, as to be probable sources of contamination. The Inspector was instructed to require certain necessary works with regard to drainage of sheds, stables, and yards, and as to dealing with yard surfaces to be carried out. He was also directed to test with colour, to see whether an old well in this area was on the line of the spring. This was done, and it was found that coloured water emptied into the well appeared at the spring shoot in about 12 minutes. It was however felt that to deal adequately with

all sources of pollution would entail very heavy expense, and it might after all be unsuccessful; that even if it were successful, only a part of the village supply would be dealt with, and a further supply for the rest of the village might have to be found later on; and that it might, in the end, be more satisfactory and less expensive to approach the Clutton Rural District Council to ascertain upon what terms they would be willing to supply Marksbury from their mains.

There is no reason why this enquiry should not be made, though before your Council definitely decides to get water from them I advise that all the wells in the village be analysed, so that the exact condition of the present supply may be known and information obtained as to how many and which houses will have to be supplied. I must say, that in my opinion, the provision of a supply from the Clutton Council's mains is the best way out of the difficulty, and has the advantage of dealing with the whole village, instead of only a part."

After discussion it was decided to have all the wells analysed, and defer approaching the Clutton Council till the results were known. There the matter rested at the end of the year.

Corston.—The West Gloucester Water Company supplied one or two houses at entrance to this village in 1910. The local piped supply continues good, but more standpipes are required, many users having to go from 20 to 90 yards for water.

Burnett.—The standpipes are fairly convenient for users, only one house being much too far distant: your Inspector reports that he understands the agents are taking the supply nearer to it. The supply continued ample despite the dry summer.

Kelston.—Supplied partly by a piped spring supply, partly by wells. At Kelston Mill there is only one standpipe for nine houses, which are from 25 to 65 yards away from it.

Northstoke and Swinford.—In both these places the users have to go distances ranging up to 60 yards: a few more supply taps would be useful.

Queen Charlton.—Cottage supply not satisfactory; wells liable to pollution.

Stanton Prior.—Supply good and fairly convenient for users (piped supply).

Newton St. Loe.—Piped supply good, but more standpipes needed, as some inhabitants have to go a considerable distance to standpipe.

Compton Dando.—Water supply cannot be considered good, as except at the farms nearly the whole population is dependent upon wells, dry-walled and liable to pollution from gardens, and often from sewage.

From the above it will be gathered that the public supplies in the villages are good as far as they go, but require extension. The populous town of Keynsham is supplied by the West Gloucester Water Company and a few wells. Brislington Village is partly served by the Bristol Waterworks Company, partly by West Gloucester Water Company, and some wells.

Statistics.—Area of District, 21,406 acres.

Population (census 1911), males 4,846; females, 5,295 total, 10,141.

Population (estimated to middle of 1911), 10,192.

Inhabited houses (census 1911), not yet known. Separate occupiers = 2313.

Average number of persons per house, not yet known.

Census 1911.—From figures provisionally issued, it appears that your population has increased since 1901 by 1,875. This is a very satisfactory increase, and it has taken place at a greater rate than in the previous inter-censal period, the result being that during the last few years the Birth, Death, and Epidemic Disease Rates have been calculated on too small a population and have been too high. For example, the population estimated in the usual manner to the middle of 1910 was 9,295, but the census of 1911 shows that really the population then was over 10,000, and the rates for 1910 were nearly 1 per 1,000 less than they were thought to be.

It is also satisfactory to find that in only one Parish out of the 14 was there any decrease of population, and that a slight one, 13; in one Parish the number is the same, and in all the others there has been a greater or less increase, that increase being, as might be expected, most marked in the more urban Keynsham and Brislington, where it was respectively 570 and 1,148.

RATES, 1911:—

Death Rate	11·83
Birth Rate	21·29
Epidemic Disease Rate	0·88
Infant Mortality Rate	67·55

The DEATHS (from all causes) belonging to your own population, occurring during the year, were 121, compared with 118 in 1910, 126 in 1909, 144 in 1908, 139 in 1907, 129 in 1906, 134 in 1905, 134 in 1904, 81 in 1903, 128 in 1902, 114 in 1901, 120 in 1900, 120 in 1899, 122 in 1898, 117 in 1897, 144 in 1896, 132 in 1895, 85 in 1894, and 119 in 1893.

This number, 121, is arrived at by excluding deaths of non-residents, and including those of members of your population occurring in public institutions outside your district. These 121 deaths amongst the estimated population give a *Death Rate* of 11·83 for the year. This rate was 12·69 in 1910, 13·72 in 1909, 15·58 in 1908, 15·64 in 1907, 14·82 in 1906, 15·01 in 1905, 15·32 in 1904, 9·05 in 1903, 13·78 in 1902, 13·01 in 1901, 14·58 in 1900,

14·37 in 1899, 14·83 in 1898, 14·34 in 1897, 18·09 in 1896 16·61 in 1895, 11·5 in 1894, 16·19 in 1893, 16·39 in 1892, and 17·82 in 1891.

The Death Rate of 11·83 is well below the average for the preceding ten years, viz. : 13·86. It is the lowest rate since 1903, and 2 below that for England and Wales, less the 213 towns, which is 13·9.

The following Table gives the average number of deaths from various classes of disease for the ten years, 1901 to 1910 inclusive, also the average number of persons dying at certain age periods, during the same ten years. Beneath these averages are placed the actual numbers dying from the same causes, and at the same age periods during 1911 :—

Average of Ten Years, 1901 to 1910.	Deaths from					Deaths			
	Bronchitis, Pneumonia, Pleurisy, etc.	Heart Disease.	Phthisis	Epidemic Diseases.	All other causes.	Under 1 year of age.	Under 5 years of age.	Between 5 and 65 years of age.	Over 65 years of age.
	15·7	22·2	6·4	5·4	69·1	20·0	25·9	44·5	52·9
1911	19	21	5	9	67	15	21	43	57

From the first half of the above Table it will be seen that in each class the deaths are below the average except in the case of those from diseases of the Lungs, and in those from Epidemic disease ; in the latter case the increase is entirely due to Infantile Diarrhœa. The deaths from Phthisis, which for some years showed a decline, had, in the four years prior to 1907, risen above the average, and the number of deaths to 8 in 1904, 1905, and 1906 ; there was a slight decline in 1907 and 1908 which was not maintained during 1909, when the number of deaths (9) was the highest for ten years ; during 1910 the deaths again fell below the average, and the fall is maintained in 1911. The second half of the table shows deaths below the average in every age group except that over 65 years of age.

The Births registered during 1911 were 222, as compared with 213 in 1910, 213 in 1909, 212 in 1908, 241 in 1907, 238 in 1906, 223 in 1905, 249 in 1904, 222 in 1903, 221 in 1902, 173 in 1901. Five of these births however do not belong to your district and have been transferred elsewhere ; they are therefore not counted in these statistics.

The *Birth Rate* for the year, reckoned on the 217 births, is 21.29 per 1000 living, and with the exception of that for 1901, is the lowest on record for the past 18 years. This rate was 22·91 in 1910, 23·20 in 1909, 22·95 in 1908, 26·91 in 1907, 26·93 in 1906, 25·55 in 1905, 28·89 in 1904, 26·09 in 1903, 25·81 in 1902, 20·85 in 1901, 25·32 in 1900, 29·54 in 1899, 26·32 in 1898, 29·23 in 1897, 30·11 in 1896, 28·50 in 1895, 28·73 in 1894, and 28·30 in 1893. The average Birth Rate for the ten years, 1901 to 1910, is 25·22, and the rate for 1911 (21·29) is thus seen to be considerably below

the average for your district, and also that for England and Wales, less the 213 towns, which is 23·4.

Epidemic Diseases caused nine deaths, viz. : One from Measles, 2 from Whooping Cough, and 6 from Diarrhœa. These deaths are equivalent to an *Epidemic Disease Rate* of 0·88 per 1000 for the year, which is a rather high rate for your district. The average rate for the ten years, 1901 to 1910, is 0·58, so that 0·88 for 1911 is considerably above the average. There have only been three deaths from Enteric Fever during the past sixteen years.

Infant Mortality.—Fifteen children died under one year of age, compared with 26 in 1910. Premature Birth (6), Diarrhœa (6), and Wilful Murder (1), account for all but 2 of the 15. These 15 deaths give a *Rate of Infant Mortality* of 67·55 per 1000 births. This rate was 122·06 in 1910, 70.42 in 1909, 122·64 in 1908, 70·53 in 1907, 117·64 in 1906, 130·04 in 19·05, 116·46 in 1904, 63·06 in 1903, 85·97 in 1902, 104·46 in 1901, 94.23 in 1900, 112·61 in 1899, 76·14 in 1898, 91·74 in 1897, 96·49 in 1896, 94·78 in 1895, 70·75 in 1894, and 91·34 in 1893. The average rate for the ten years, 1901 to 1910, is 100·32, so that the figure for 1911 (67·55) is greatly below the average for your district, and is, indeed, with one exception, the lowest recorded during the preceding eighteen years. It is a little over half that for England and Wales, less the 213 towns, which is 118.

Appended to this report are the Tables I., II., III., and IV., required by the Local Government Board.

Table I. shows the estimated Populations, Birth rates, Death rates, Infant Mortality rates, Deaths in Public Institutions, Deaths of non-residents, and other information, for the years 1906 to 1911.

Table II. shows the number and character of cases of Infectious diseases, including Phthisis, notified during the year, and the number of such cases removed to Hospital.

Table III. is a Table of deaths from all causes (omitting those of non-residents), classified according to diseases and ages at death.

Table IV. is a Table which deals with Infant Mortality under one year, and states the causes of death, by weeks and months up to one year.

Epidemic (Infectious) Disease :—

Notifications.—Smallpox 0, Cholera 0, Diphtheria and Membranous Croup 2, Erysipelas 6, Scarlet Fever 6, Typhus Fever 0, Enteric Fever 7, Relapsing Fever 0, Continued Fever 0, Puerperal Fever 1, Plague 0, Phthisis 6, Total 28.

The notifications of epidemic disease (excluding Phthisis) during 1911 show a considerable decrease over those of last year, 22 as compared with 31 in 1910. During the last ten years, 1901 to

1910, the notifications have varied greatly from year to year, between a maximum of 138 and a minimum of 19; the average of the 10 years is 69·0, so that the number of the notifiable infectious cases (omitting Phthisis) in 1911, is less than one third the average.

The decrease in notified cases is due to a drop in diphtheria and scarlet fever. Enteric Fever has been more in evidence than for many years; particulars will be found under that heading. The year has been free from anything approaching an epidemic of any notifiable infectious disease. Measles, Whooping Cough, and Mumps have, however, been epidemic in certain parts of your district and have called for special measures of warning to parents and exclusion of scholars from schools.

Smallpox :—

No case notified. Owing to the practical absence of this disease from the country, there has been no need to carry out special medical examination of tramps as was done in 1909, and some previous years.

In August, a report was received from the County Medical Officer of Health dealing with the preparedness of the County to prevent spread from cases of smallpox. This report was made the text of a special report to your Council in September, in which, after summarising the views of the County, M.O.H., I stated " I may say at once, that personally, I entirely agree with the views of the County Medical Officer." With regard to Vaccination :— Your Council is of course not the Vaccination Authority, and so can only have an indirect influence in securing its more thorough performance. I am convinced that it is the one essential protective against smallpox, and, if thoroughly and universally carried out would prove an absolute preventive, rendering special smallpox hospitals totally unneccessary, and I would urge your Council and its individual members to exercise all the influence they can to increase the extent of vaccination in the district. The attention of the Vaccination Authority should be called to the Report, and a hope expressed that they will urge their officers to use every endeavour to secure Vaccination. That such endeavour is needed is shown by the figures given in the Report, from which it is seen that the percentage of children unvaccinated in the Keynsham District has steadily increased from 14·5 in 1905 to 32·3 in 1908, and 29·1 in 1909. Every grown-up person can protect himself against smallpox, if he chooses, but these unfortunate children have no voice in the matter, and it is upon them that the full force of an epidemic would fall, causing terrible suffering and mortality."

" With regard to the question of special hospital provision, I would suggest that the Clerk write to the County Medical Officer to the effect that your Council is prepared to consider proposals for a Joint Hospital for smallpox, which will serve your district."

The suggestions in above report were adopted.

Scarlet Fever :—The drop in cases of this disease, which commenced in 1904, continued steadily up to the end of 1907, the cases notified each year being : 58 in 1903, 47 in 1904, 40 in 1905, 9 in 1906, and 6 in 1907. The comparative freedom of your district from this disease was maintained in 1908 (8 cases), but during 1909

there was again an increase, 16 cases being notified. This increase was only to be expected after three years of practical freedom, and was maintained during 1910, 17 cases.

In 1911, however, there has again been a drop, only 6 cases being notified. The distribution of the disease was as follows :— During the first quarter there were two cases, one at Marksbury and one at Keynsham : during the second quarter there was one case at Brislington : in the third quarter one at Keynsham ; and two in the fourth quarter, one at Keynsham and one at Chewton Keynsham. This last case was that of a boy employed and living at a dairy farm sending milk out of the district ; he was removed to the Keynsham Isolation Hospital on 30th December.

The above were all single cases occurring in seven families : in no case was there further spread, either within or without the house.

The type of the disease has been mild, and there was no death. This is the seventh year in succession without a death from Scarlet Fever.

Diphtheria and Membranous Croup :—

In this disease, as in Scarlet Fever, the number of notifications had fallen greatly during 1906, 1907, and 1908, when 9, 8, and 4 cases only were respectively notified. In this connection it is interesting to compare the number of cases notified during five-yearly periods between 1891 and 1910 ; these are given below :—

Diphtheria Notifications from 1891 to 1910.

Year	No. Notified	Total in 5 years
1891	0	= 3
1892	1	
1893	1	
1894	1	
1895	0	
1896	2	= 17
1897	1	
1898	3	
1899	5	
1900	6	
1901	81	= 181
1902	23	
1903	17	
1904	32	
1905	28	
1906	9	= 74
1907	8	
1908	4	
1909	48	
1910	5	

From the above it will be seen that from 1891 to 1895 (and indeed from 1887 to 1895) Diphtheria was practically unknown in your district. During the succeeding five years there was for the first three no marked increase, but during the two latter its occurrence became more frequent, corresponding to the more numerous cases in the County of Somerset. The next five years stand out in marked contrast to the previous ten, showing in every year, but especially in the first of the five, a considerable participation in the general wave of Diphtheria which prevailed during this period over this part of the country. In my Report for 1908, I stated "it was in 1900 that the City of Bristol, probably affected by the neighbouring country, began its period of high Diphtheria prevalence which is now subsiding, and I hope that the drop of cases notified during 1906, 1907, and 1908 in your district to 9, 8, and 4, heralds approach to the conditions obtaining before 1900, though it is hardly to be expected that we shall ever revert for any long period to such a condition of freedom as was enjoyed prior to that year."

The hope then expressed was not fulfilled. During 1909 the cases notified rose to 48, but this increase was almost entirely due to an outbreak at, and confined to, the village of Corston. This outbreak accounts for no less than 42 out of the 48 notifications, leaving only 6 for the rest of the district. During 1910 only five cases were notified, and consideration of the figures in the table above for the five years 1906 to 1910 seems to show that, unless some special localised outbreak such as occurred at Corston in 1909 arises, the average number of cases to be expected yearly is about six. During the past year 1911 only two cases were notified; both were in the same family in Brislington, both were bacteriologically examined, but not by me, gave positive results, and both recovered.

Antitoxin:—Under the Antitoxin order of the Local Government Board of 15th Aug., 1910, the Council has sanctioned the provision of Antitoxin gratuitously for use in cases where the people are too poor to obtain it for themselves, and have adopted certain suggestions made by me in a special report as to its storage and distribution. There are two depôts, one at Keynsham, which is reasonably accessible from about one half of the district, and the other at Corston which serves the other half. The medical men practising in the district have been informed of the arrangements and supplied with forms of request for supply of Antitoxin. Owing to the practical absence of Diphtheria during the past year no application for the remedy was received, but the arrangements made in 1910 remain in force.

Typhus Fever:—No case notified.

Enteric or Typhoid Fever:—Seven cases were notified. The first occurred during the second quarter, at Wilmington, in a servant who returned home ill from her place in Bath. There were 2 cases in the third quarter, 1 at Keynsham and 1 at Brislington. The latter was that of a woman who had come there from London.

The Keynsham case was that of a boy of four who had frequently bathed in the river Chew, and was said to have swallowed a good deal of water. The river was then very low, and, as it receives sewage from houses within and without your district above the bathing point, if infected sewage had gained access to the water it is possible that the disease may have been so contracted. The mother of this boy was notified as having Typhoid during the last quarter, and was probably a case of direct infection during nursing. There were 3 other cases in the fourth quarter, 1 at Saltford, 1 at Brislington and 1 at Keynsham : this last was a man working in Bristol, and was apparently unconnected with the 2 previous Keynsham cases.

Of these cases 3 were tested by Widals reaction, 1 giving a positive, and 2 a negative result.

There was no death from this disease.

Continued Fever :—No case.

Puerperal Fever :—One case notified, which proved fatal. The nurses things and instruments were disinfected.

Erysipelas :—Six cases were notified as compared with 6 in 1910, 9 in 1909, 12 in 1908, 4 in 1907, 13 in 1906, 8 in 1905, and 14 in 1904.

No special interest or importance attached to any of these cases.

Chicken Pox :—Early in January notice was sent me of 3 cases at Whitchurch School, and up to 24th January 24 cases in all occurred. This is the only prevalence of which I have knowledge.

Measles :—This disease has been practically absent during the year.

On January 9th I received notice from Whitchurch School that a child was noticed in school with swollen eyes, and a red rash : I visited him next day, and found him suffering from Measles. On 23rd, notice of 10 further cases was received, and on visiting I found a child sickening. Twenty-eight other children who had not previously suffered were excluded ; some of them were affected later, and the total number of cases which came to my knowledge was 22. Notices as to precautions necessary to be exercised by parents were posted in the village. The School was closed by the Chief Medical Inspector of Schools on 30th January, partly on account of Measles, partly on account of Chickenpox and Whooping Cough, which were also epidemic at the same time : it remained closed till 20th February.

This is the only outbreak of which I have any knowledge. There was 1 death.

Whooping Cough.—On 6th January, notice of 3 cases came from Whitchurch School, and up to 24th 8 further cases were reported. The school was closed for this disease and Measles on 30th January.

On 15th June, 3 cases were reported from Keynsham Infant School. Twenty-four children who had not previously had the disease were excluded, and warning notices posted in the town. From 15th June to 14th July 9 further cases were reported; some of the latter arose during the holiday. On the School re-opening the disease had apparently ceased prevalence.

In the third quarter of the year there were 2 deaths in the same family at Keynsham; as far as I know there were no other cases in the place at that time.

Mumps.—On 11th September, notice of 2 cases were received from Whitchurch School, and between then and 1st December 37 other cases were reported, making a total of 39. The School was then closed by County Education Authority for purposes of grant.

In all notified cases full enquiry is made at the houses and results reported to me. The usual precautions were taken. Enquiries were made at the infected houses, and printed instructions, stating the precautions necessary to avoid spread of infection, as well as notices requiring disinfection, were sent to the occupiers. Notices were also sent to schools, requiring the exclusion of children from infected houses. The absence, bacteriologically, of the Diphtheria bacillus was ascertained before cases were considered free from infection. In all cases, except those of Erysipelas, thorough disinfection was carried out by your Inspector upon the termination of illness.

Non-Notified Infectious Disease.—In addition to enquiries in notified cases, your Inspector has paid numerous visits to various houses and villages on account of cases of Measles and Whooping Cough, reported from schools, and has left papers of advice to parents, and posted Public Notices as to these diseases in the various villages affected.

Diarrhœa.—Owing to the extremely hot and dry summer the country generally suffered severely from Infantile Diarrhœa, but I am pleased to record that there was no prevalence of it in your district calling for very special measures.

The Circular of the Local Government Board with reference to this disease was considered at the Council's meeting early in September, and it was decided to obtain 500 leaflets of advice as to the feeding and management of children, which were to be sent to the clergymen of the various parishes and to the district nurses for distribution, and the Inspector was instructed to give advice where opportunity offered.

The deaths from this disease during the year were 6 in number, compared with 0 in 1910; 0 in 1909; 3 in 1908; 0 in 1907; 3 in 1906; 2 in 1905; 6 in 1904; 0 in 1903; 1 in 1901. In ten years there have been 21 deaths—an average of 2·1 a year.

Influenza.—No death was registered from this disease, and I have no knowledge of any special prevalence during 1911.

PHTHISIS :—

The scheme for voluntary notification of this disease, which had been approved by your Council, was to come into force on 1st January, 1912, and all the forms, &c., were on the point of being sent to the printer when the Local Government Board Order for compulsory notification from 1st January, 1912, was issued in November.

In December I reported on the above Order, and after summarising its chief provisions and stating what forms, &c., it would be necessary to procure in order to carry them into effect, the report proceeded : " The primary object of notification is to enable the Local Authority to assist in the eradication of the disease. In the case of Tuberculosis prevention of infection and the treatment of the patient cannot well be separated, and in such cases it is desirable that the Authority should be able to offer santatorium treatment : there are, however, many cases which, under suitable instruction and supervision, may properly be treated in their own homes. As your Council can at present offer no sanatorium treatment, it remains to consider under what conditions of instruction and supervision cases can be treated at home, and what steps are necessary for detection and control of the disease, and for preventing the spread of infection.

1. As regards detection of the disease :—

It is frequently very difficult to determine whether a case is really consumption or not, and a bacteriological examination of the sputum is of very great assistance in settling the question. Not only so, but a like examination from time to time is most useful in showing whether a case is progressing, or the reverse, and, in the case of supposed recovery, in determining whether the patient has ceased to be infectious. Arrangements should therefore be made by which any medical man may send specimens from cases or suspects for examination for the presence of Tubercle bacilli. I understand the County Health Laboratory undertakes such work, and I suggest that enquiry be made as to the mode in which they will do this for your Council.

Further, it is most important that cases should be detected as early as possible, because treatment in the early stages is much more likely to be successful. It is therefore practically essential that when a case is detected the other inmates of the house should be examined with a view to the detection of incipient cases ; for consumption is infectious and may have already spread to others though they have not so far shown definite signs of infection. I therefore suggest that the doctor who notifies a case of Phthisis should examine all the other inmates of the house to discover whether any of them show signs of the disease, your Council paying him some fee for each person so examined.

Again further, as in early suspected cases there may be no sputum or expectoration which can be bacteriologically examined,

it would, I think, be well for your Council to supply, for use in such cases, some other test, such as that of Von Pirquet, which the doctor in attendance may use.

2. Control of the disease and prevention of spread of infection :—

These two matters are intimately connected and may I think, best be dealt with by setting out the procedure I propose should be adopted on receipt of a notification.

On its receipt the house would be visited by your Inspector, myself, or some other officer appointed for the purpose, enquiry made as to the home conditions or work conditions of the patient, advice as to the rectification of any faulty conditions of living tendered, and instructions as to precautions necessary to avoid transference of infection to others given. A special spitting flask and disinfectant, with leaflet describing their use, so as to prevent risk from the expectoration, would be supplied in necessitous cases ; and a card describing what the patient ought to do, and to avoid doing would be left with him. Any faulty conditions such as bad ventilation, dampness, or overcrowding of the dwelling, would be noted, and steps taken for their amendment. Return visits would be paid from time to time. Further, disinfection of the sick room and its contents would be offered from time to time, and endeavour made to secure this both for the sake of the patient, who might otherwise re-infect himself, and for the sake of the other inmates.

In case of death disinfection would be pressed.

Most of the above requirements were sanctioned by your Council when the institution of Voluntary Notification of Phthisis was agreed to : it may be well, however, to summarise them :—

(1) Provision of necessary forms and register.

(2) Provision of bacteriological examination of sputum.

(3) Provision for detection of early and contact cases of Tuberculosis.

(4) Provision of spitting flasks, disinfectant, and explanatory leaflets as to their use, and establishment of depôts for flasks and disinfectant.

(5) Provision of cards of instructions as to what a consumptive patient ought or ought not to do.

It would, I think, be advisable if consideration of this report were referred to the Committee which considered the scheme of Voluntary Notification, with power, as time presses, to take such action as seems to them required."

The suggestion as to reference to Committee was agreed to and the Committee met in a few days. The result of their deliberations, which were sanctioned by the Council, is contained in the following circular-letter sent to the various medical men practising in the district.

PULMONARY TUBERCULOSIS.

Dear Sir,

You have doubtless received from the Clerk to the above Council certain papers with reference to the Notification of Pulmonary Tuberculosis.

To facilitate the detection of cases, and to assist in prevention of spread of infection the Council has decided to provide the following :—

(1). Bacteriological Examination Free of Charge.

Outfits for collection of sputum can be obtained on application to Mr. Geo. Watts, Sanitary Inspector, 2, St. Keyna Road, Keynsham. Specimens should be forwarded by post to Dr. Savage, Public Health County Laboratory, Weston-super-Mare.

(2). Provision of Sputum Flasks and Disinfectant.

A flask and supply of disinfectant, with directions for use and cleansing the flask will be given, free of charge, in cases certified by the medical man to be unable to provide them. Fresh supplies of disinfectant will also be obtainable on proper application. Flasks and disinfectant may be obtained either from Revd. C. C. Parker, The Vicarage, Corston, or from Mr. Geo. Watts, 2, St. Keyna Road, Keynsham.

(3). Means for detection of early or Doubtful Cases.

In cases where the diagnosis is doubtful or where there is no sputum, and the medical attendant wishes to avail himself of the test, he can, on application to the Medical Officer of Health, obtain material for carrying out Von Pirquet's Surface Vaccination Test, which consists in making two scarifications in the superficial layers of the skin, through a drop of the Serum prepared according to Von Pirquet's method, and gently rubbing it in. A small red papule or papules develop in 24 hours if patient is tuberculous. The skin must be previously sterilised. The Serum consists of Tuberculin diluted with glycerine.

The Council is prepared to pay the medical man a fee of 2/6 for each contact case so tested, where the test is considered necessary, and so long as it is not the case which the medical man has been called in to visit in the ordinary course of his practice.

(4). Means for detection of Contact Cases.

The importance of early recognition of cases and proper treatment cannot be over-estimated, and the Council is anxious that the inmates of houses where there is a case of Pulmonary Tuberculosis should be examined by the medical man who notifies the actual case, to ascertain whether any show signs of the disease which have not so far been recognised. The Council is prepared to pay a fee of 2/6 for a report to the Medical Officer of Health of the result of each such examination. Will you kindly inform me whether you are willing to undertake such examination and report upon the terms stated?

(5). Provision for Notification of Change of Address.

The Council is prepared to pay a fee of 1/- for notice of Change of Address of a notified case. The usual notification form may be used to give this information, with the words "Change of Address" written across it.

(6). Disinfection.

This will be carried out free of charge, and it is desirable in the interest of the patient himself, as well as the other inmates of the house, that the sick room, or patient's bedroom, and the bedding, etc., should be disinfected from time to time during the illness. In case of death, disinfection will be required in every case.

Yours faithfully,

JOHN C. HEAVEN,

Medical Officer of Health.

Arrangement was subsequently made with the Registrar to immediately notify me of any death from Phthisis, so that no time might be lost in securing disinfection.

I think your Council is now quite well prepared to deal with this disease, and if proper advantage is taken of the facilities offered to medical men and patients there should in time be a diminution in the number of cases in the district; these, however, are at present not numerous, and the notifications show that, as might be expected, most of the cases are in the more urban parts.

Six cases were notified—1 under the Poor Law Regulations and 5 under Regulations (Hospitals). Of these 5 were in Keynsham and 1 in Whitchurch.

Their ages were as follows :—

Males.	Females.
36	39
36	—
63	—
39	—
47	—

Enquiries were made as to these cases and advice given. There were 5 deaths from Phthisis—1 at Stanton Prior, 2 at Keynsham, 1 at Brislington, 1 at Kelston.

Disinfection was carried out in each case after death, and in 1 instance a house vacated by a consumptive was dealt with previous to re-occupation. I am not aware of any special accommodation for treatment of Phthisis, early or advanced, in hospital.

Isolation Hospital.—The negotiations to acquire the interest of the Warmley District Council and obtain sole control over the Hospital have this year been successfully completed by

the payment to them of £250 by the Keynsham Council. As soon as it was in our hands a Hospital Committee was appointed, and an inspection made of the building to discover defects with a view to remedy. As a result the whole outside has been thoroughly repainted and small structural repairs executed; the whole drainage system has been overhauled, a great deal of it relaid with improvements; the stoves and kitchen range have been put in good order, and the bath geysers made to work.

No case was removed to Hospital until 30th December, when a case of Scarlet Fever was admitted.

Although very useful, the Hospital does not meet the needs of the district when it is desired to isolate more than one infectious disease at the same time.

Steam Disinfector and Disinfection.—This machine has again proved of great value. One hundred and fifty-one articles have been dealt with. This is apparently a small number, but the cases in which disinfection was required were only 10, and articles capable of such disinfection are boiled at home; a large number of articles were so dealt with. It would be well to have the boiler surveyed to see that it is in order; this has not been done for some time. Rooms are now disinfected with formalin or cyllin spray, which have replaced the old method of sulphur fumigation; in many cases, where rooms in old cottages have to be dealt with, the use of sulphur is almost impossible, as the fumes pervade the house. The new method is quite as, if not more, effectual, and certainly more comfortable to the inmates.

Ambulance.—This was used when required, and remains in good condition.

Disinfecting Van.—Has been in fairly constant use, and has answered all requirements well.

Bacteriological Examinations.—The specimens examined this year were fewer by far than in any previous year since the examination was commenced, being only 10 in number. The number in 1910 was 73, 461 in 1909, 53 in 1908, 67 in 1906, 200 in 1905, 302 in 1904, and 88 in 1903.

Of the 10 examinations 7 were for Diphtheria, the results being:—

Diphtheria found in throat only	2	7
Suspicious organisms in throat	2	
No Diphtheria found	3	

Three specimens of blood were submitted to Widal's Test, 1 giving a positive and 2 a negative result.

HOUSING and TOWN PLANNING ACT:

The Committee appointed at the end of 1910 to consider the manner in which the Act was to be worked determined that endeavour should be made to carry it out through the Medical Officer of Health and the Inspector, the extra work thus thrown

upon them being recognised by an increase of salary. It was further determined that an inspection should first be made of all the houses with rental of less than £16, and that, as it is essential that any such house inspected shall be unquestionably identifiable in the future, power to number the houses throughout the district was necessary. Application was made to the Local Government Board quite early in 1911 for such power; so far no reply has heen received from the Board, and inspection in the urban parts of Brislington and Keynsham cannot be proceeded with, as identification without numbers would in these parts be hopeless.

The number of £16 houses in the district, as given by the Overseers, is :—

Brislington	556	Whitchurch	95
Keynsham	547	Stanton Prior	20
Burnett	12	Newton St. Loe ...	60
Marksbury	55	Northstoke	31
Queen Charlton ...	16	Kelston	37
Saltford	94	Compton Dando ...	63
Corston	85		
Priston	52	Total ...	1723

I informed the Council that it would take five years at least for all these to be inspected by myself and the Inspector, and that every year, after the first, fewer fresh houses could be dealt with, as those already inspected would have to be visited to see that requirements were being carried out, and that they were being kept in order afterwards. This estimate of time appears to be rather under than over the mark, for although inspection commenced on 1st February, and fortunately there was very little infectious disease to require attention, and so more time could be devoted to this work and it went on steadily, the number of houses inspected was 337, or rather less than one fifth of the whole number.

In addition to the 337 visits of original inspection your Inspector has paid 103 revisits with agents or owners, and 50 revisits while repairs are in progress, making a total of 490 visits paid by him and myself for the purposes of this Act alone.

The following Table **A** gives particulars of results of inspection under Section 17 of the Act asked for by the Local Government Board :—

TABLE A.

No. unfit for habitation.	No of representations made to S.A. with view to Closing Order	No. of Closing Orders made	No. of houses made fit after Closing Order was made	No. of houses where defects were remedied without Closing Orders
9	9	9	nil	22

This Table **A** gives very few particulars, and no information as to the number of houses dealt with, of notices served, or of the character of the houses with regard to accommodation, overcrowding, and other particulars. Your Inspector has drawn up the following Table **B**, which gives much more extended information :—

TABLE B.

No. of houses in the District under £16 per year rental, 1,723. PARISH.	No. of houses Inspected, less 9 unfit for habitation.	No. requiring Notices.	No. Reported to Council.	Notices served under Sec. 94 P.H. Act.	Notices served under Sec. 15 H. & T. P. Act.	Notices complied with.	Number of occupants.	Statute adults, two children under 12 as one adult.	Bedroom accommodation allowing 300 c. ft. per stat. adult.	No. of houses with 3 or more bedrooms	No. of houses with 2 or less.	No. of Bedrooms with fireplace.	No. of Bedrooms without fireplace.	No. of houses overcrowded.	No. of houses served with water from a piped supply	No. of houses supplied from wells or spring
Burnett	12	12	nil	nil	nil	nil	51	45	78	11	1	26	9	nil	12	nil
Compton Dando ...	45	45	42	28	14	5	173	155	274	25	20	40	74	1	nil	45
Corston	54	54	45	nil	45	6	195	170	269	16	38	62	68	4	47	7
Kelston	11	11	nil	nil	nil	nil	34	30	85	4	7	13	13	nil	11	nil
Keynsham	27	27	16	nil	nil	nil	137	114	186	16	11	52	18	nil	27	nil
Chewton Keynsham	18	13	nil	nil	nil	nil	71	55	193	14	4	41	8	nil	16	2
Marksbury	29	29	25	nil	25	nil	114	98	187	11	18	26	41	1	nil	29
Northstoke	9	9	nil	nil	nil	nil	31	29	59	4	5	11	11	1	9	nil
Swinford	12	12	nil	nil	nil	nil	52	44	70	6	6	10	19	nil	12	nil
Priston	37	37	20	nil	nil	nil	147	121	249	13	24	36	55	1	33	4
Queen Charlton ...	13	13	nil	nil	nil	nil	41	35	110	8	5	19	17	nil	2	11
Saltford	42	40	23	18	5	11	161	138	285	7	35	43	46	2	27	15
Stanton Prior ...	19	19	nil	nil	nil	nil	57	53	127	8	11	17	29	nil	17	2
TOTALS ...	328	321	171	46	89	22	1264	1087	2172	143	185	396	408	10	213	115

From Table **B** it will be seen that in all but 7 out of the 328 houses there dealt with, some repair or alteration of greater or less importance was required. In most instances the defects were minor defects of roofs, walls, or flooring, or shaky staircases and bedroom floors.

VENTILATION on the whole is fair, there were very few houses without some through ventilation, and not many windows that did not open. The chief lack of ventilation was caused by the absence of fireplaces in bedrooms. 408 bedrooms had none ; this was met either by requiring provision of fireplace, or of ventilation over the door, or in other ways.

DAMPNESS was fairly frequently met with ; often it was due to defective roof, or absence of guttering, to defective pointing of walls, or in a good many instances to ground resting against outside walls.

ACCOMMODATION :—Speaking generally, there does not seem to be any great lack of houses: at Corston, Saltford, and Swinford, however, the want is felt, though, at Corston, it has been, to some extent, met by the erection of two new three-bedroomed cottages. Chewton Keynsham, on the whole, shows the best housing conditions, the houses being mostly well built and arranged : indeed, some of them would form excellent models for future buildings. What appears to be wanted, generally, is not so much more houses, but a rearrangement of occupiers ; one often found one or two persons in a cottage which would accommodate a good family and *vice versâ*. These better cottages, however, would have a higher rent, and the larger a man's family, the less able is he to pay high rent, he has, therefore, to crowd into a low rent cottage. The existence of 185 houses (more than half those examined) with two or less bedrooms, is regrettable, as it often leads to moral overcrowding : no domestic dwelling should, in future, be sanctioned, which has not at least three bedrooms.

Overcrowding.—In only 10 of the 328 houses examined was there physical overcrowding, allowing 300 cubic feet to each adult in bedrooms. In only one instance was a lodger the cause of overcrowding. With regard to what may be termed moral overcrowding, where older children sleep with or in the same room as their parents, or where big boys and girls, or even grown-up sons and daughters, occupy the same bedroom, the conditions are very different ; such cases are far too frequent. It is, however, difficult to see how they can be obviated where there is a large family and only two bedrooms, and the householder either cannot afford to pay a higher rent for a larger cottage or there is none to which he can remove. The condition often arises when children are old enough to go to work and still live with their parents. There is, of course, no power under the Public Health Acts by which moral overcrowding can be dealt with ; so long as there is sufficient cubic space one is powerless to interfere.

The whole matter of accommodation and overcrowding seems to resolve itself into this—that until some means of building proper cottages, to pay at about 2s. to 2s. 6d. per week, can be devised, the real question of accommodation cannot be settled. As things are at present, either there are not sufficient or large enough houses in a place to adequately house the inhabitants, and consequently overcrowding and other evils arise : or these evils are the result of inability of the inhabitants to pay sufficient rent for proper cottages already existing, and to which they might remove. To deal with either of these conditions would mean expense on the rates : under the first condition the Authority would have to erect cottages and let them at rents which would not pay ; under the second condition, if they made a person abate overcrowding by removing to a large enough cottage, the rent of which he could not afford, they should in common fairness give him aid towards his rent. In either case, the inhabitants would be in receipt of what would practically be charity.

Sanitary Conveniencies.—Taken on the whole, there seems to be no very serious lack of these, though in many cases the situation and construction of privies, drains, and cesspools have called for alteration and amendment. As far as possible Dry Privies are being substituted for Cesspit Privies in the really rural parts.

The following account of work done or in hand has been supplied me by your Inspector.

"Burnett.—The agents to Cottage Property are carrying out repairs to 12 cottages ; a list of defects has been sent them (no notices served).

Compton Dando.—The repairs to cottages (14) on the Hundstrete Estate will be taken in hand shortly. The Feoffees of the Compton Dando Church Estate have decided to carry out repairs to the 11 cottages, for which notices have been served.

Corston.—Two cottages have been erected by Lord Temple, each with three bedrooms; they are now fit for occupation. These will accommodate two of the largest families, and the agent will abate the other cases of overcrowding by adjusting the houses to accommodate. The cottages for which notices have been sent (36) will, in all probability, be begun this spring, as the agent has sent a list of the repairs he is willing to carry out to the Council for approval.

Keynsham.—Sixteen houses in Fairfield Terrace have been reported upon, and the Housing Committee has been to view them. These will need extensive alterations.

MARKSBURY.—The Hundstrete Estate Cottages (25), for which notices have been sent, will be taken in hand shortly.

PRISTON.—Notices for 37 cottages were sent early in January, 1912. Twenty were reported upon in 1911.

SALTFORD.—In addition to notices complied with, 8 other cottages are being repaired.

This deals in all with 106 houses, which we have every reason to believe will be repaired as soon as the owners can take them in hand. Several are waiting for more favourable weather."

I must say that I have been to some extent surprised, and certainly pleased, by the way in which the agents of large estates and the owners generally of houses inspected have considered the requirements made by your Council. There has been great willingness to do what seems necessary, and so far there has been no friction. I think this is to a great extent due to the fact that the agents, &c., have been met by me or your Inspector, the property gone over with them, and requirements pointed out on the spot.

Houses Unfit for Habitation.—A row of six houses in the Labbat, Keynsham, and a row of three cottages at Saltford were reported as unfit. These were visited by the Housing Committee, which endorsed the report, and Closing Orders were made for all nine. These orders became operative just about the end of the year, and the matter has not been lost sight of.

Dairies, Cowsheds, and Milkshops.—Number inspected 66. Whitewashing carried out twice a year. Improvements have been made in several sheds during the year ; there are still many requiring amendment, some are in course of improvement, and several owners or agents have promised to amend. No action in causing examination of Cows for Tuberculosis by Veterinary Surgeons has been taken.

Slaughter-Houses.—In much the same condition as in 1905, *vide* Annual Report for that year. Number on register 10. Several of these premises are not well-fitted for the purpose, but as they cannot be licensed we can only try to have them reasonably kept. Some are, however, quite reasonably good and well kept. They are not visited specially at times of slaughtering : the Inspector holds no special certificate in meat inspection. On 25th Jan., a butcher telephoned me asking me to see the carcase of a bullock which he had just slaughtered, and which he thought was diseased. I visited the slaughter-house and found the animal had been suffer-

ing from Tuberculosis. The necessary steps for dealing with this diseased carcase were at once taken, the butcher giving every assistance.

Bakehouses.—Number, 12. Condition fair. No underground bakehouses. Whitewashing carried out. One bakehouse at Keynsham at present out of use.

Bye-Laws and Urban Powers.—No fresh powers obtained this year. Present Bye-Laws work satisfactorily and are enforced.

Factory and Workshops Act.—This Act has at present only a slight application to the district. There is only one factory, for metal springs, at Keynsham.

I have considered the Table furnished by the Home Office for report under this Act. No single outworker's name has been sent to the Council in 1911. No complaints have been received from the Factory Inspector. It seems hardly necessary to print it *in extenso,* with the small amount of information given above scattered over it.

SCHOOLS :

As Medical Inspector of School Children (under the Somerset County Council), for the Keynsham area, I have visited all the schools in your district during the year, and have medically examined such children as the County Council has desired, viz. : all Infants not previously examined, girls and boys of 7 to 8, and girls and boys, aged 12 and upwards not previously examined ; and such children as were referred to me by the teachers as, in their opinion, requiring medical examination. I have also seen thirty-one children who have in previous years been found to have defects, and in many cases there has been improvement or cure, resulting from medical treatment sought as result of advice given on inspection.

The number of Schools is 13, but in two instances, at Keynsham and Newton-St.-Loe, there are separate premises for infants. In all other cases children of all ages are taught in the same building.

The schools themselves, with the exception of the comparatively modern Keynsham Infant School, are the Old Church, or National Schools, and speaking generally, fall far short of modern ideas of school buildings. They are old, their arrangement, lighting, ventilation, warming, cleanliness, style of desk, arrangement of desk with regard to light, and, in many instances, the cloak-room accommodation require greater or less improvement. The attention

paid to cleanliness of Schools is chiefly conspicuous by its absence. In several cases beams, &c., thick with dust, or dust clinging to inequalities in the walls, were noticed. Floors too, though their condition varied in different schools, were far from clean. It seems the custom that they should be scrubbed once a term, and dry sweeping is resorted to in the intervals. It is obvious that such measures are insufficient—if even an attempt at cleanliness is to be made there should be a weekly scrubbing and a daily sweeping with wet sawdust. Expense is of course the excuse urged. The sanitary arrangements, especially in the more rural schools, are in many cases, capable of great improvement, but as no actual nuisance arising from them can be alleged, no legal pressure can be exercised in securing amendments. In some instances, however, the sanitary conveniences are good.

The cloak-room accommodation at Whitchurch School, though slightly improved in 1909, is still far from adequate ; the school too is overcrowded, there is no playground for the boys, and the boys' privies, &c., open into the girls' playground.

No improvement in the very inadequate cloak-room accommodation has been affected at Brislington School. A new Infant School is however about to be erected, and I understand improvement in the present school will then be made.

At Priston School, a new cloak-room has been added.

At Keynsham Mixed School the walls have been recoloured, but the surface is still rough, uneven stone harbouring dust. New cloak-rooms have been added ; lavatory basins are provided, and a new urinal, and two new W.C.'s for girls have been erected.

During the past year, 404 children have been examined. This is 12 more than in 1910.

The detailed results of these examinations are the property, and in the possession, of the Somerset County Education Committee, and therefore what follows is merely the result of general impressions left upon my mind. Such impressions are not infrequently found to be scarcely borne out when tested by actual statistical facts, but I see no reason to alter what I said last year : that the children in your district are, on the whole, clean, healthy, and well cared for. It seemed to me however that I came across rather more children whose nutrition was poor than in former years : but there were very few whose nutrition had to be classed as bad. The general good physical condition of those children under the care of the Guardians was noticeable. As is usually the case, the largest number of defects noted was connected with teeth and

eyes. With regard to teeth, it was the exception to find a really sound set ; in fact, such cases were very few in number. Decay of teeth, to a greater or less extent, was constantly met with, and very frequently to a very serious extent, in quite young children. It is curious that the amount of this defect varied considerably in different schools, some seeming to have a much higher percentage of affected children than others. There does however seem to have been an improvement in the care as to cleanliness of the teeth since attention has been drawn to its necessity. I noted a good many more children whose teeth were obviously cleaned than in previous years, and the care as to this was more marked in some schools than in others. At Corston it was specially noticeable, and a prize was offered here by a Bath dentist for the child whose teeth showed most evidence of attention : it would be a good thing if someone would give a small prize at each school for the same purpose.

The amount of defect of vision found was also considerable. but not, I think, greater than is usual. It is matter for regret that there seems a disposition in some parishes for parents to avoid taking their children to be examined by the school oculist, when notice is sent to them to attend.

Another condition which varied greatly in different schools was the state of the heads with regard to lice ; in some cases there was hardly a child affected, while in others the number was considerable. The freedom of the boys from these parasites, which was noted in 1908, was again very marked, in only a few instances were they found to be suffering. There did seem to be an improvement generally in the cleanliness of heads and specially in schools where the County Council's Nurse has visited and interviewed parents, but I regret to say that the effect of her work seems to be dying out. I should be glad of Nurse's visits and assistance in seeing that heads were cleansed in all the schools.

The number of cases of enlarged tonsils was, I think, about the average ; and I met with no case in which there were very marked symptoms of adenoids, though there were several in which examination with a view to ascertaining their existence, and removal if necessary, was advised. Several children were reported to have had been already operated on for enlarged tonsils, or adenoids.

Speaking generally, the presence of marked mental defect or serious conditions, such as Heart Disease (of which there were one or two cases), or of marked deformity, were conspicuous by their absence ; and in no case did I come across a child suffering from active Rickets, or Consumption or Tubercular Disease. Enlarged glands were not numerous, and the enlargement slight and probably not tuberculous. Signs of old glandular abscesses, or tubercular

joints, or hip disease were undiscovered. At Priston, however, there were 3 or 4 well-marked cases of enlarged thyroid gland, goitre or Derbyshire neck. It was not only one family that was affected.

Many parents were present, and seemed to take interest in the examination, and to be grateful for advice. It is pleasing to record that in many cases of bad sight, spectacles have been provided by the parents, several of whom expressed their gratitude at the good they had done the child. Several cases in which advice given had been taken were noted, including removal of tonsils, and one case of radical cure for inguinal hernia.

School Closure.—No school has been closed by the District Council during the year.

Keynsham School.—As noted under heading "Measles," this School was closed on 30th January, on accout of Measles, Chicken Pox, and Whooping Cough, by the County Education Committee because attendance was so greatly interfered with.

Whitchurch School.—As already noted under heading "Whooping Cough," this school was closed by the Education Committee on account of small attendance. This school was again closed in December, by the same Authority, for the same reason, on account of Mumps.

Exclusion of Scholars.—Notices are sent to the School attended by any case of Diphtheria, or Scarlet Fever, requiring exclusion of the patient, and other children from the same house, till disinfection has been carried out.

Notices of exclusion of known cases of Measles, Whooping Cough, Chickenpox, and Mumps, have been sent to Schools in addition to those for Diphtheria and Scarlet Fever.

Surveyor's Report.—From the Report of your Surveyor (page 29) it will be seen that 61 plans for new buildings in the parishes of Keynsham, Brislington, and Whitchurch were submitted in 1911, which is 33 more than the number submitted in 1910. Of these 61 plans 29 were approved and 32 were disapproved.

During the year the usual Quarterly Reports, as well as other reports as to special matters—Infectious Outbreaks, Supply of Antitoxin, the working of the Housing and Town Planning Act, Rats and Plague, Tuberculosis (Hospital) Regulations, and Public Health (Tuberculosis) Regulations, Report of the County Medical Officer of Health on the provision in the county for dealing with

Smallpox, Priston and Marksbury Water Supplies—have been made, and my advice has frequently been sought as to matters coming under the notice of your Council.

The past year has not seen any specially remarkable advance in the sanitary conditions of the district, but work upon lines already laid down is being gradually and consistently carried out, with the result that such conditions throughout the district are steadily, if slowly, improving,

I wish most heartily to express my thanks to my fellow officers and to the medical men of the district for the great help they have given me during the past year.

I remain, Gentlemen,

Your obedient servant,

JOHN C. HEAVEN, D.P.H., &c.,

Medical Officer of Health.

ANNUAL REPORT
FOR 1911.

LIVERPOOL CHAMBERS,
CORN STREET, BRISTOL.

To KEYNSHAM RURAL DISTRICT COUNCIL.

GENTLEMEN,

Your Council have considered plans for 61 Buildings during the year 1911, of which 32 were disapproved and 29 approved.

The number of Houses erected was 23, and of Houses altered structurally was 6, 2 of which were business premises and the others private houses.

The Drainage of 27 Houses was tested and approved.

A Petroleum License was issued in respect of premises in High Street, Keynsham, for the storage of petroleum and petrol.

The Drainage of Charlton Park Road has been greatly improved by the laying of about 350 yards of sewer, a portion of which was paid for by the owners of the premises and the remainder by the Council.

The Drainage of Keynsham and Brislington has worked well, and the syphons beneath the Brislington brook have been regularly cleansed four times during the year.

Your Council have decided that where a sewer is within reasonable distance of a building estate, it is to be extended to the estate for the drainage of houses to be erected thereon before plans for buildings will be approved.

A portion of Grove Park Avenue, Brislington, 315 feet in length, has been made up at the cost of the frontagers, and no objection was raised to the apportionment of the cost upon the owners.

Powers have been applied for under the Private Streets Works Act in respect of Charlton Park Road, Keynsham, but these will not be put into force until the roadway has been made, of the width of 36 feet, by the giving up of certain portions of land by the owners.

The Isolation Hospital, which is now the property of the Council solely, has been painted, and certain structural improvements made.

Your obedient servant,

April 2nd, 1912. HENRY M. BENNETT.

Inspector of Nuisances Report,

For the Year 1911.

Keynsham, Somerset.

	No. of Complaints received during the year	126
	No. of Houses, Premises, &c., inspected under P.H. Acts ...	315
	No. of Houses, Premises, &c., inspected under H. & T.P. Act	337
	No. of Re-visits to see that work has been carried out, or for other reasons	240
	Housing re-visits	153
Results of Inspection	No. of Houses or Premises cleansed, repaired, or W. washed under P.H. Acts	116
	No. of Orders issued for Sanitary Amendment of Houses or Premises (not Housing)	3
	No. of Houses disinfected, or to which disinfectants were supplied	33
	No. of Infectious cases visited	21
	Phthisis	7 and 7 visited
Sewers	No. of New Sewers laid down by the Authority* ...	Nil
	No. of Sewers cleansed or repaired	Nil
House Drains	No. repaired or cleansed	14
	No. relaid (piped)	7
	No. trapped or ventilated	19
	No. of New Pipe Drains laid	21
	No. of other New Drains laid	Nil
Privies, Cesspools, and W.C.'s	No. of Privies cleansed and reconstructed	1
	No. of Cesspools cleansed or reconstructed	2
	No. of Cesspools closed	5
	No. of New Privies or Cesspools	Nil
	No. of New W.C.'s	11
	No. of Dry Privies constructed	12
Water Supply	No. of Samples of Water taken for analysis ...	7
	No. of Wells closed	2
	No. of *Old* Houses supplied with Company's Water ...	5
	No. of New Wells	1
	No. of New Cisterns (soft water)	Nil
	No. of Wells or Cisterns cleansed or repaired ...	10
New Houses	No. of New Houses certified as fit for habitation ...	Nil
	No. of such Houses supplied with Company's Water ...	Nil
	No. of such Houses supplied with Wells or Cisterns ...	Nil
	No. of Dairies, &c., inspected	66
	No. of Bakehouses inspected	12
	No. of Slaughter-houses inspected	9
	No. of Factories inspected	1
	No. of Workshops inspected	1
	Overcrowding (cases of) reported	13
	,, ,, abated	6
	No. of Legal Proceedings	Nil

(Signed) GEORGE WATTS, A.S.I.

The Inspector only certifies houses in those parts of the District where Building Bye-laws are in force, but where the Surveyor has no control, so that "nil" does not represent the total number of New Houses occupied during the year ; the number of W.C.'s applies to the same area only.

* Refers to that part of district over which the Surveyor has no control.

TABLE I.

Vital Statistics of Whole District during **1911** and previous years.

Year	Population estimated to Middle of each Year	Births			Total Deaths Registered in the District		Transferable Deaths		Net Deaths belonging to the District			
			Net						Under 1 Year of Age		At all Ages	
		Uncorrected Number	Number	Rate	Number	Rate	of Non-residents registered in the District	of Residents not registered in the District	Number	Rate per 1,000 Net Births	Number	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1906	8837	238	238	26·93	129	14·59	7	9	28	117·64	131	14·82
1907	8949	241	241	26·91	139	15·53	6	7	17	70·53	140	15·64
1908	9063	212	212	22·95	143	15·48	6	7	26	122·64	144	15·58
1909	9179	213	213	23·20	124	13·40	6	8	15	70·42	126	13·72
1910	9295	213	213	22·91	124	13·33	10	4	26	122·06	118	12·69
1911	10192	222	217	21·29	127	12·46	10	4	15	67·55	121	11·83

Area of District in acres (exclusive of area covered by water), 21,406. Total population at all ages (at Census of 1911)—10,141.
Number of inhabited houses not yet known, and average number of persons per house, not yet known (at Census of 1911).

TABLE II.

Cases of **Infectious Disease** notified during the Year **1911.**

Notifiable Disease	Number of Cases notified.								Total Cases notified in each locality.	Total cases removed to hospital.
	At all Ages	At Ages—Years								
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65	65 and upwards		
Small-pox	...	...	...	...	...	...	...	...	...	...
Cholera	...	...	...	...	...	...	...	...	...	...
Diphtheria(including Membranous croup)	2	...	2	...	...	...	...	...	...	...
Erysipelas	6	...	...	...	2	1	2	1	...	...
Scarlet fever ...	6	...	1	3	2	...	...	...	...	1
Typhus fever ...	...	...	...	...	...	...	...	...	...	...
Enteric fever ...	7	...	1	1	1	4	...	...	...	...
Relapsing fever ...	...	...	...	...	...	...	...	...	...	...
Continued fever ...	...	...	...	...	...	...	...	...	...	...
Puerperal fever ..	1	...	...	...	...	1	...	...	...	...
Plague	...	...	...	...	...	...	...	...	...	...
Phthisis : Under Tuberculosis Regulations, 1908	1	...	...	...	...	1	...	...	...	...
Under Tuberculosis Regulations, 1911	5	...	...	...	...	4	1	...	...	...
Others	...	...	...	...	...	..	...	...	...	...
Totals	28	...	4	4	5	11	3	1	...	1

Isolation Hospital—Keynsham Isolation Hospital, in Keynsham Parish.

Total available beds, 20.

Number of diseases that can be concurrently treated, 1.

TABLE III.

Causes of, and Ages at, Death, during the Year 1911.

Causes of Death	Nett Deaths at the subjoined ages of "Residents" whether occurring within or without the District.									Total Deaths whether of "Residents" or "Non-Residents" in Institutions in the District.
	All ages	Under 1 year	1 and und'r 2 yrs.	2 and und'r 5 yrs.	5 and und'r 15 yrs.	15 and und'r 25 yrs.	25 and und'r 45 yrs.	45 and und'r 65 yrs.	65 and upwards	
1	2	3	4	5	6	7	8	9	10	
All causes (certified)	121	15	4	2	2	5	13	23	57	14
Enteric Fever ...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...
Measles	1	...	1	...	...	...	...	...	...	...
Scarlet fever ...	...	...	...	...	...	...	...	...	...	...
Whooping-cough ...	2	1	...	1	...	...	...	...	...	...
Diphtheria & Croup	...	...	...	...	...	...	...	...	..	...
Iufluenza	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever	...	...	...	...	...	...	...	...	...	...
Phthisis (Pulmonary Tuberculosis)...	5	...	...	...	..	1	3	1	...	...
Tuberculous Meningitis...	...	...	...	...	...	...	...	...	...	...
Other Tuberculous diseases ...	...	...	...	...	...	...	...	...	...	...
Rheumatic Fever ...	...	...	...	...	...	...	...	...	...	...
Cancer, malignant disease...	7	...	...	...	..	...	...	2	5	1
Bronchitis	11	...	2	...	...	...	...	1	8	2
Broncho-Pneumonia	5	1	1	...	...	...	...	1	2	2
Pneumonia (all other forms)...	3	...	...	...	...	...	2	...	1	...
Other diseases of respiratory organs	...	...	...	...	...	...	...	...	...	...
Diarrhœa and Enteritis...	6	6	...	...	...	...	...	...	...	...
Appendicitis and Typhlitis...	2	...	...	...	...	1	...	1	...	...
Alcoholism	...	...	...	...	...	...	...	...	...	
Cirrhosis of liver ...	...	...	...	...	...	...	...	...	...	...
Nephritis & Bright's disease...	2	...	...	...	...	...	2	...	...	...
Puerperal Fever ...	1	...	...	...	...	...	1	...	...	...
Other accidents and diseases of pregnancy & parturition	...	...	...	...	...	...	...	...	...	...
Congenital Debility and Malformation, including premature birth	6	6	...	...	...	...	...	...	...	...
Violent deaths, excluding Suicide ...	3	...	...	..	...	...	...	3	...	...
Suicides	...	...	...	...	...	...	...	...	...	...
Heart diseases ...	21	...	...	...	...	...	2	9	10	2
Wilful murder ...	1	1	...	...	...	...	...	...	...	...
Other defined diseases...	38	...	...	1	2	3	3	5	24	7
Diseases ill-defined, or unknown ...	7	...	...	...	...	...	...	...	7	...

TABLE IV.

KEYNSHAM RURAL SANITARY DISTRICT.

INFANT MORTALITY during the Year, 1911.

Nett Deaths from stated Causes at various Ages under One Year of Age.

CAUSE OF DEATH.	Under 1 Week	1-2 Weeks	2-3 Weeks	3-4 Weeks	Total under 1 Month	1-3 Months	3-6 Months	6-9 Months	9-12 Months	Total Deaths under One Year
ALL CAUSES :— Certified	6	1	...	1	8	1	2	3	1	15
Smallpox	...	...	...	...	...	...	...	...	...	...
Chicken-pox	...	...	...	..	...	...	...	...	...	...
Measles	...	...	...	...	...	..	...	...	...	...
Scarlet Fever	...	...	...	...	...	...	...	...	...	...
Diphtheria and Croup ...	...	...	...	...	...	...	...	1	...	1
Whooping Cough ...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	...	...	...	...	...	1	2	2	1	6
Enteritis	...	...	...	...	...	...	...	...	...	...
Tuberculous Meningitis	...	...	...	...	...	...	...	...	...	...
Abdominal Tuberculosis	...	...	...	...	...	...	...	...	...	...
Other Tuberculous Diseases	...	...	...	...	...	...	...	..	...	...
Congenital Malformations	1	1	...	..	2	...	...	...	...	2
Premature Birth ...	3	...	...	...	3	...	...	...	...	3
Atrophy, Debility, and Marasmus	1	...	...	...	1	...	...	...	...	1
Atelectasis	...	...	...	...	...	..	...	...	...	...
Injury at Birth	...	...	...	...	...	...	...	...	...	...
Erysipelas	...	...	...	...	...	...	...	...	...	...
Syphilis	...	...	...	...	...	...	...	...	...	...
Rickets	...	...	...	...	...	...	...	...	...	...
Meningitis (*Not Tuberculous*)	...	...	...	...	...	...	...	...	...	...
Convulsions	...	...	...	...	...	...	...	...	...	...
Gastritis	...	...	...	...	...	...	...	...	...	...
Laryngitis	...	...	...	...	...	...	...	...	...	...
Bronchitis	...	...	...	...	...	...	...	...	...	...
Pneumonia (all forms) ...	...	...	...	1	1	...	...	...	...	1
Suffocation, overlaying ...	...	...	...	...	...	...	...	...	...	...
Other Causes	1	...	...	...	1	...	...	..	...	1

Births in the year, 217 { legitimate / illegitimate } not ascertained.

Net Deaths in the year of { legitimate infants / illegitimate infants } 15

PHTHISIS: Sanatorium and Hospital Accommodation.

Classes for which accommodation is provided.	By whom provided ?	Where situated ?	Total number of beds.	How are patients selected ?	Are patients under the care of a resident Medical Officer ?	What charge, if any, is made for the use of beds ?	Do the Sanitary Authority use (1) their Isolation Hospital, or (2) their Smallpox Hospital, for cases of Phthisis ?	Do the Sanitary Authority reserve beds in any Phthisis Sanatorium : if so, how many, and in what Sanatorium ?	Do the Sanitary Authority provide portable open-air Shelters or Tents ?
(*a*) Early cases (*b*) Intermediate cases (*c*) Advanced cases	No special accommodation.						No.	No.	No.

Have the Council, or any private Body, provided a Dispensary ? If so, give particulars. } No.

JOHN C. HEAVEN, *Medical Officer of Health.*

Jan. 4th, 1912.